

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P489669

Luminaire Tested: **CLM-24-4-INS-A19156-LD4-3LO-50-120-EDD**

Issue Date: 3/11/2021

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



**Test Information**

Test Method: LM-79-08  
Report Number: P489669  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2101-115-8)  
Test Lab: INNOVATION CENTER  
Issue Date: 3/11/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: CLM-24-4-INS-A19156-LD4-3LO-50-120-EDD  
Description: 2X4 CLM LED LUMINAIRE WITH A19156 LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

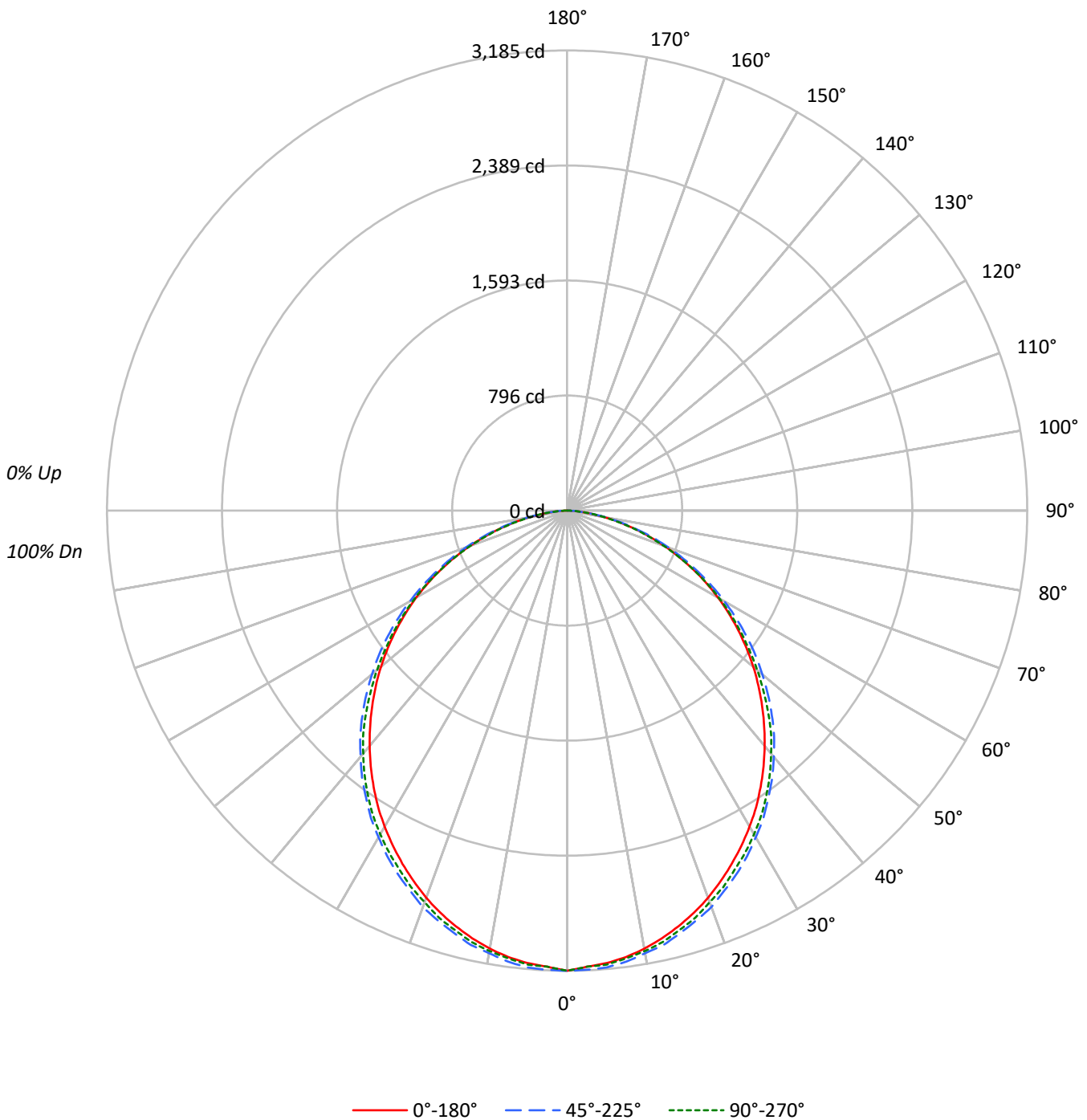
Lumens per Lamp: N/A  
Luminaire Lumens: 8374.4 lumens  
Efficiency: N/A  
Efficacy: 119.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.21 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

Input Watts (W): 70.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT

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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20				20				20				20				20	
RC	80				70				50				30				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	109	105	100	97	106	102	98	95	98	95	92	94	92	89	91	88	87	85
2	99	91	85	79	97	90	83	78	86	81	76	83	78	75	80	76	73	71
3	91	80	72	66	88	79	71	65	76	70	64	73	68	63	71	66	62	60
4	83	71	63	56	81	70	62	56	68	61	55	65	59	54	63	58	54	51
5	77	64	55	48	75	63	54	48	61	53	48	59	52	47	57	51	47	45
6	71	58	49	42	69	57	48	42	55	47	42	53	47	41	52	46	41	39
7	66	52	44	38	64	51	43	37	50	43	37	49	42	37	47	41	37	35
8	61	48	39	34	60	47	39	33	46	38	33	45	38	33	43	37	33	31
9	57	44	36	30	56	43	35	30	42	35	30	41	35	30	40	34	30	28
10	54	41	33	27	52	40	32	27	39	32	27	38	32	27	37	31	27	25

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	4286	4286	4286
5°	4246	4286	4260
10°	4207	4250	4229
15°	4149	4216	4186
20°	4084	4181	4130
25°	4004	4120	4073
30°	3923	4056	4019
35°	3835	3987	3950
40°	3735	3907	3858
45°	3630	3814	3742
50°	3521	3692	3595
55°	3393	3552	3443
60°	3249	3384	3279
65°	3062	3179	3064
70°	2817	2931	2786
75°	2481	2593	2443
80°	2016	2104	1993
85°	1403	1496	1460



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	300.0	3.6
10°-20°	850.1	10.2
20°-30°	1267.9	15.1
30°-40°	1502.5	17.9
40°-50°	1520.3	18.2
50°-60°	1327.7	15.9
60°-70°	970.3	11.6
70°-80°	516.3	6.2
80°-90°	119.3	1.4
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2418.0	28.9
0°-40°	3920.5	46.8
0°-60°	6768.5	80.8
0°-90°	8374.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8374.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3185	3185	3185	3185	3185	
5°	3144	3150	3173	3181	3154	298
15°	2979	2998	3027	3045	3005	840
25°	2697	2730	2776	2786	2744	1243
35°	2335	2371	2427	2444	2405	1460
45°	1908	1942	2004	2006	1966	1472
55°	1447	1476	1514	1492	1468	1293
65°	962	981	999	979	962	952
75°	477	488	499	481	470	507
85°	91	93	97	98	95	115
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3185.3	3185.3	3185.3	3185.3	3185.3
2.5°	3160.4	3170.7	3181.3	3186.0	3160.1
5°	3143.8	3149.8	3173.4	3180.7	3153.8
7.5°	3116.6	3125.6	3148.5	3151.8	3125.9
10°	3079.5	3095.4	3110.7	3127.2	3095.7
12.5°	3032.0	3053.6	3079.5	3082.4	3058.5
15°	2978.6	2998.5	3026.7	3044.9	3005.4
17.5°	2918.8	2938.1	2974.6	2977.9	2954.0
20°	2852.1	2876.0	2919.8	2927.5	2884.6
22.5°	2776.5	2808.6	2845.2	2852.5	2820.9
25°	2697.1	2730.3	2775.5	2785.7	2743.6
27.5°	2614.2	2646.0	2696.8	2704.1	2668.6
30°	2525.2	2555.1	2610.9	2623.1	2587.0
32.5°	2435.0	2464.8	2526.6	2536.8	2501.7
35°	2334.7	2371.2	2427.3	2444.2	2404.8
37.5°	2232.5	2268.0	2331.7	2347.0	2304.5
40°	2126.6	2161.8	2224.5	2237.2	2196.3
42.5°	2018.5	2053.6	2120.7	2122.7	2088.8
45°	1907.9	1941.8	2004.2	2005.8	1966.4
47.5°	1795.8	1830.0	1885.7	1879.4	1842.2
50°	1682.3	1714.8	1763.6	1751.0	1717.4
52.5°	1564.8	1596.3	1642.4	1621.9	1590.3
55°	1446.6	1475.8	1514.3	1492.4	1467.9
57.5°	1327.5	1357.0	1386.6	1364.3	1343.1
60°	1207.4	1233.2	1257.5	1234.9	1218.6
62.5°	1085.2	1107.5	1128.4	1106.8	1091.5
65°	961.8	981.4	998.6	978.7	962.4
67.5°	839.0	855.6	871.5	850.9	834.0
70°	716.2	730.5	745.1	723.8	708.2
72.5°	595.0	607.7	620.6	600.0	586.4
75°	477.2	488.2	498.8	480.6	469.9
77.5°	364.7	374.0	381.3	369.7	359.4
80°	260.2	267.2	271.5	266.8	257.2
82.5°	167.3	172.2	174.6	174.2	167.9
85°	90.9	92.6	96.9	97.9	94.6
87.5°	35.2	37.5	38.5	41.5	38.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)